DOCUMENT RESUME

ED 422 454 UD 032 514

AUTHOR	Loveless, Tom
TITLE	The Tracking and Ability Grouping Debate. Volume 2, Number 8.
INSTITUTION	Thomas B. Fordham Foundation, Washington, DC.
PUB DATE	1998-08-00
NOTE	37p.; Foreword by Chester E. Finn, Jr.
AVAILABLE FROM	Thomas B. Fordham Foundation, 1015 18th Street N.W., Suite 300, Washington, DC 20036; toll free telephone: 1-888-TBF-7474; World Wide Web: http://www.edexcellence.net (single copies free).
PUB TYPE	Information Analyses (070)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Ability Grouping; *Academic Achievement; Disadvantaged Youth; Educational Research; Elementary Secondary Education; *Equal Education; Instructional Program Divisions; Minority Groups; Poverty; *Student Placement; Tables (Data); *Track System (Education)

ABSTRACT

Tracking and ability grouping are common practices that are often harshly criticized. Both practices group students of similar achievement levels for instruction, but they differ in how this task is accomplished. Elementary schools typically use ability grouping in reading instruction, with instruction targeted to the reading level of each group. Middle and high schools use tracking to group students between classes, offering courses in academic subjects that reflect differences in students' prior learning. Critics charge that tracking not only fails to benefit any students, but that it also channels poor and minority students into low tracks and dooms them to an inferior education. Research has indicated that when students are grouped into separate classes and given an identical curriculum, there is no appreciable effect on achievement. However, when the curriculum is adjusted to correspond to ability level, it appears that student achievement is boosted, especially for high ability students receiving an accelerated curriculum. Heterogeneous grouping has not been adopted by enough middle schools and high schools to conclude whether detracking produces achievement gains for anyone, and research to date cannot conclusively demonstrate that one or the other is the better way to organize students. The charge of unfairness more accurately depicts tracking's past than its present. In the past, tracking was rigid and deterministic, but today, schools assign students to tracks for particular subject areas based on proficiency. Most schools assign students based on their choices once prerequisites have been met, and transcript studies show that students may move independently up or down in each subject's hierarchy of courses depending on their performance. One criticism still appears valid. Low tracks often emphasize good behavior and menial skills, while high tracks offer preparation for college. These differences in learning environments particularly depress the academic achievement of poor and minority students. In contrast, Catholic high schools appear to provide low track students with a quality education, and they are remarkably similar in boosting low track students to higher levels. Some principles for future policies are outlined. An appendix compares two meta-analyses of the track system. (Contains 7 tables.) (SLD)

ED 422 454

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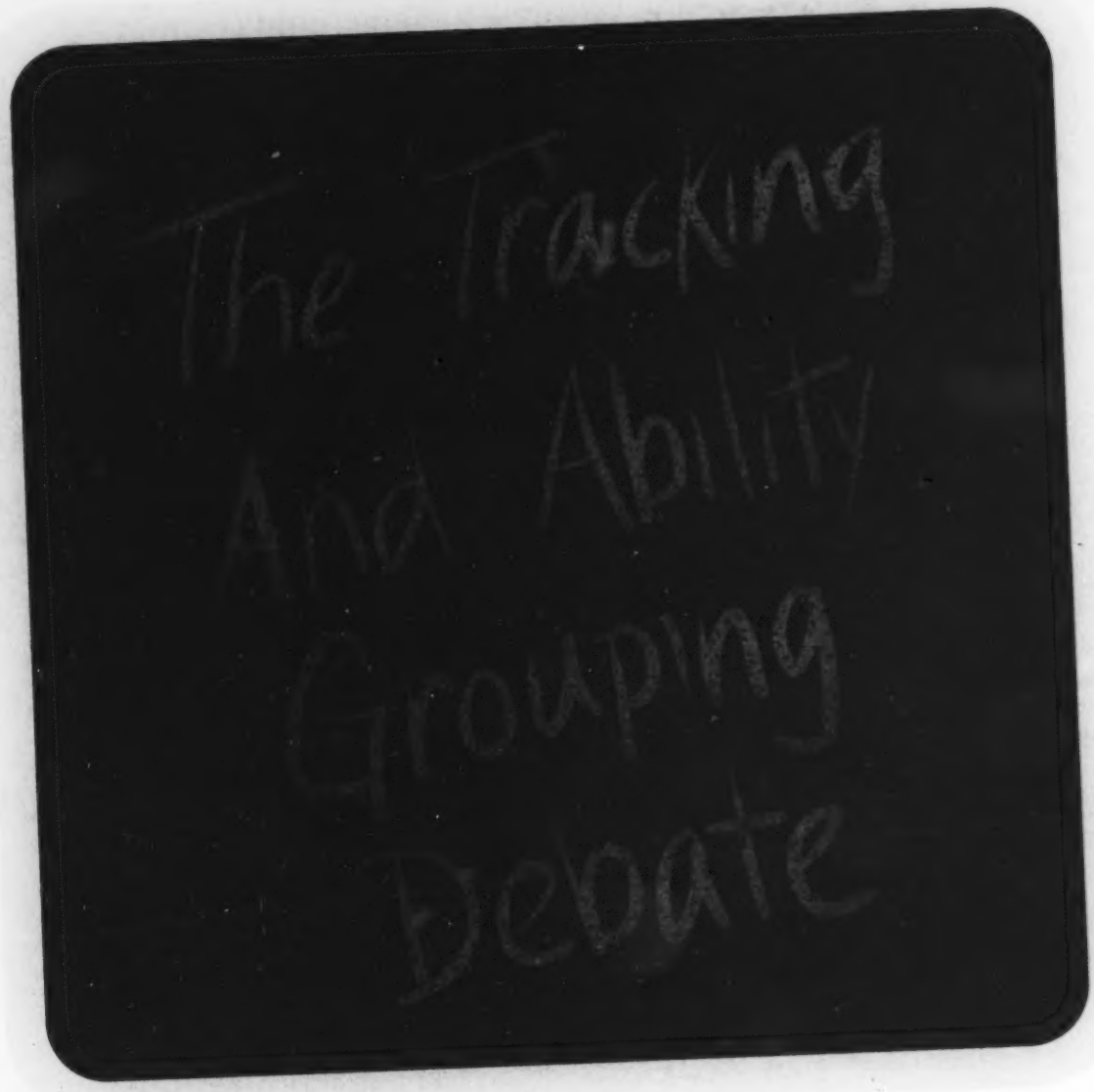

by Tom Loveless

AUGUST 1998

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Fordham Report

Vol. 2, No. 8 August 1998

The Tracking And Ability Grouping Debate

by
Tom Loveless

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Foreword

Tracking and ability grouping remain among the most hotly debated topics in American education today, as they have been for nearly a century. After all this time and attention, what have we actually learned about these issues? That was the assignment we gave to Tom Loveless.

Studies of tracking undertaken during the 1980s, such as Jeannie Oakes's *Keeping Track*, left no doubt about their conclusions: Schools that track are bad. Schools that do not track are good. It is that simple. Or so we were told. As a result of this harsh yet popular criticism, many schools and school districts have turned to detracking or heterogeneous grouping, often to the discomfiture of many parents and teachers. Sometimes it is claimed that the policy change will boost overall achievement, sometimes that it will foster equity, sometimes both.

Could the answer actually be this simple? Or have schools jumped too quickly onto a detracked train?

The Thomas B. Fordham Foundation seeks to help serious education reformers sort through the muddle of evidence and pseudo-evidence in such debates and to equip them with the clearest and most trustworthy information. When it comes to tracking and ability grouping, Professor Loveless was the obvious choice for this mission. From 1990 until last year, he conducted three extensive surveys of tracking practices, visited 29 schools, and interviewed some 250 teachers and principals. This wide-ranging research has informed his forthcoming book, *The Fate of Reform: Why Some Schools Track and Others Schools Don't*. If anybody knows how tracking really works and what the research really shows, Loveless is the one.

As you will see from the lucid paper that follows, tracking and ability grouping strategies differ widely from school to school. They diverge even more widely from their portrayal in the popular criticisms of the 1980s. Armed with that information, Dr. Loveless digs into the sensitive matter of whether those criticisms are valid today. His answer tells a more complicated and more honest story than we have heard before on this topic.

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Chester E. Finn, Jr., President
Thomas B. Fordham Foundation
Washington, D.C.
July 1998

Executive Summary

Tracking and ability grouping are common features of schools. They are also two of the most harshly criticized practices in American education. Both group students of similar achievement levels for instruction, but they differ in how this task is accomplished.

Ability Grouping— Elementary schools typically use ability grouping in reading instruction. Students are organized into groups within classes, creating "bluebirds" and "redbirds," for example, with instruction targeted to each group's reading level.

Tracking— Middle schools and high schools use tracking to group students between classes, offering courses in academic subjects that reflect differences in students' prior learning. One student who is an outstanding reader may take an honors English course, while another student who struggles with reading may take a remedial reading course. An eighth grade math whiz may tackle high school courses (algebra or geometry) while other pupils are still learning how to work with fractions.

The Debate

Tracking and ability grouping have fueled a debate spanning virtually the entire twentieth century. Tracking has received especially harsh criticism. Critics charge that tracking not only fails to benefit any student, but that it also channels poor and minority students into low tracks and dooms a vast number of students to an impoverished education. Defenders of tracking, on the other hand, argue that high ability students languish in mixed ability classes, that it is nearly impossible, for example, for teachers to lead students through the plot twists of *King Lear* while simultaneously instructing in phonics. In the last decade, a turning point in this debate occurred as education policymakers in several states launched initiatives to discourage tracking, recommending that schools place students of heterogeneous ability into the same classrooms. Across the nation, schools and districts have begun to detrack.

Across the nation, schools and districts have begun to detrack.

The primary charges against tracking are (1) that it doesn't accomplish anything and (2) that it unfairly creates unequal opportunities for academic achievement. What is the evidence? Generally speaking, research fails to support the indictment.

Efficacy

When students are ability grouped into separate classes and given an identical curriculum, there is no appreciable effect on achievement. But when the curriculum is adjusted to correspond to ability level, it appears that student achievement is boosted, especially for high ability students receiving an accelerated curriculum. Heterogeneous grouping has not been adopted by enough middle and high schools to conclude whether detracking produces achievement gains—for poor, minority,

and low achieving students or anyone else. In sum, research comparing tracking and heterogeneous grouping cannot conclusively declare one or the other as the better way of organizing students.

Fairness

The charge of unfairness more accurately depicts tracking's past than its present. In the past, tracking was rigid and deterministic. Schools assigned students to vocational, general, or academic tracks, thereby pre-determining students' entire high school experience—from start to finish and for all subjects. Today, schools rarely assign students to a regimen of college or vocational courses across subject areas. Instead, assignment to math tracks is based on math proficiency, English tracks on reading proficiency, etc. Moreover, most schools assign students to tracked classes based on student choice, once prerequisites have been met. And transcript studies show that most students may independently move up or down in each subject's hierarchy of courses, depending on their performance.

American education now includes both tracked and untracked schools. Several decades of research and debate have yet to prove that one is better than the other.

This does not mean that all of tracking's flaws have vanished. One criticism still appears valid: low tracks often emphasize good behavior and menial skills, while high tracks offer preparation for college. These differences in learning environments particularly depress the academic achievement of poor and minority students, who are assigned disproportionately to low tracks. In sharp contrast, Catholic high schools appear to provide low track students with a quality education, and they are remarkably successful in boosting low track students to higher levels.

Principles for Future Policy

State and district policies that condemn tracking cannot be reconciled with the research. Three principles should govern future policy:

1) *Schools must be granted autonomy to decide grouping policies. Principals, teachers, and parents are in the best position to craft the grouping policies of any particular school, not policymakers many miles away.*

2) *Tracked schools should work to improve themselves, primarily by insuring that low track students receive a challenging curriculum that emphasizes academic progress.*

3) *Untracked schools must alleviate the fears of parents, especially the parents of high achieving pupils, that detracking is more concerned with pursuing a dubious social agenda than substantive academic goals.*

American education now includes both tracked and untracked schools. Several decades of research and debate have yet to prove that one is better than the other. The next generation of tracking policy should concentrate on improving the quality of education in both settings.

Introduction

This report is about tracking and ability grouping, the practice of grouping students of similar ability or prior achievement together for instruction. It is presented in four sections. The first defines terms, sketches the basic features of tracking and ability grouping systems, and describes recent changes in these practices. The second section traces the historical quest for reasonable ways of matching students and curriculum. The third part reviews the research, particularly on those aspects of tracking and ability grouping most often objected to by critics. The final section lays out three general principles for future policy.

Now is a good time to appraise this debate. Although tracking and ability grouping are as common in schools as the number-two pencil, much that is written about these practices is incendiary rather than informative. Tracking has been condemned by such prominent groups as the National Governors' Association, the ACLU, the Children's Defense Fund, the Carnegie Corporation, the College Board, and the NAACP Legal Defense Fund. Professors of education overwhelmingly deplore it. Yet surveys also show solid support for tracking among parents, teachers, and students. Several states have issued advisories urging the abolition of tracking. Districts across the country have reduced or eliminated its use, often turning otherwise placid communities into hotbeds of controversy.[1]

These disputes are about a practice that means different things to different people. The debate over tracking reflects this confusion.

In 1993, for example, hundreds of parents in Alexandria, Virginia protested the elimination of an honors section of a ninth-grade World Civilizations course, a dispute, according to the *Washington Post*, that was bitterly divisive along racial lines.[2] In 1994, a group of angry parents in Vernon, Connecticut mounted a letter-writing campaign and distributed flyers in opposition to their district's decision to abandon tracking for mixed ability classes.[3] In 1996, an advisory panel in Howard County, Maryland, after a survey of parents elicited an avalanche of 5,000 responses, singled out reductions in tracking in middle schools for sharp criticism. The panel concluded that heterogeneously grouped classes, which had been adopted to boost the self-esteem of minority youngsters, were a dismal failure.[4] In 1997, three California math teachers sued their district in federal court when letters of reprimand were placed in their personnel files for speaking out publicly against the proposed detracking of sixth grade mathematics at their school.[5] These disputes are about a practice that means different things to different people. The debate over tracking reflects this confusion.

Section One: What is Tracking?

Thirty years ago, the terms "ability grouping" and "tracking" were used to identify two distinct approaches to grouping students.

Ability grouping referred to the formation of small, homogeneous groups within elementary school classrooms, usually for reading instruction. Children of approximately the same level of reading proficiency would be grouped for reading instruction, perhaps into "redbirds" and "bluebirds."

Tracking referred to a practice in which high schools tested students, typically with both achievement and IQ tests, and used these scores to place their students into separate curricular tracks, or "streams," as they are called in Europe. The tracks covered distinctly different curricula, were binding across all academic subjects, and led to different destinations upon graduation. Three tracks were common: (1) a high track, with college-preparatory or honors courses that readied students for admission to top colleges and universities; (2) a general track that served as a catch-all for the huge group of students in the middle, those neither gifted nor deficient in their studies or those simply unsure of what they would do after high school, and (3) a low track, consisting of vocational courses and a smattering of low-level academic offerings, such as consumer math, and serving mainly low functioning and indifferent students. After graduation, general track students matriculated to second-tier colleges, community colleges, or the workforce. Low track students frequently dropped out, found work, or suffered periods of unemployment.[6]

ability grouping—n.—the formation of small, homogeneous groups within elementary school classrooms, usually for reading instruction

tracking—n.—the grouping of students by ability between classes, a strategy common in middle and high schools

Writers now use the terms "tracking" and "ability grouping" interchangeably. One hears, for example, that "tracking begins in kindergarten." In this report, I adhere to the conventional definitions employed by researchers, using "ability grouping" to refer to the grouping of students by ability within classes, which is primarily an elementary school practice, and "tracking" to refer to the grouping of students by ability between classes, a strategy common in middle and high schools. I will refer to untracked or mixed ability classes as "heterogeneously grouped."

The Prevalence of Tracking and Ability Grouping

How widespread are ability grouping and tracking? No reliable national surveys of ability grouping in elementary schools have been conducted, but a consistent picture emerges from several local studies. Ability grouping for reading instruction appears nearly universal, especially in the early grades. Schools seek to create teachable groups of children within classes containing a broad range of skills, from students who independently breeze through children's novels to those who have yet to learn basic letter sounds. Ability grouping in math is less frequent and then only in the upper grades. Tracking between classes remains rare at the elementary level.[7]

Reading groups are formed primarily on the basis of class size, students' reading aptitude—as represented in decoding and comprehension skills—and the distribution of aptitude within a class.[8] Two or three groups per class-

room are typical. While one group of students receives instruction from the teacher, the other students complete seatwork at their desks, rotate through learning stations, tackle computer tutorials, or work with a teacher's aide. Some schools create reading groups that include students from several classrooms, even different grade levels. Since reading proficiency changes over time, groups are reshuffled from year to year, sometimes more often. In one study, about 30% of pupils changed reading groups from the fall to the spring of first grade, with equal numbers moving up and down in group level.[9]

Tracking in Middle Schools

Tracking has been surveyed extensively where it begins in earnest, at the secondary level. Middle schools typically group pupils in some subjects, but not all (see Table 1). Distinct levels of curriculum can usually be found in English and mathematics. In science and social studies, students are more frequently grouped heterogeneously.[10] Students are typically assigned to English and math levels based on their previous grades, teacher recommendations, and placement tests designed by the middle school or district staff. Schools hold parent meetings, conduct individual counseling sessions, and distribute literature describing various course offerings. If parents insist on a particular placement, they are likely to get their way.[11]

Although the grade levels included in middle schools vary by region, most middle schools begin with fifth, sixth, or seventh grade and end with eighth or ninth grade. It's not unusual for middle schools to delay tracking in English until seventh or eighth grade.[12] Then honors English classes may be offered for advanced students and remedial reading classes for struggling students. Some schools schedule poor readers into double periods of reading and English. Marked differentiation of the math curriculum doesn't usually begin until sixth or seventh grade, when advanced students take a pre-algebra course. Tracking is clearly evident by eighth grade, when about one-fourth of all students take algebra (see Table 2). The largest group of eighth graders is placed in "eighth grade math," a course with an ill-defined curriculum that varies according to the locally adopted

Table 1
Tracking in the Middle Grades, 1988[13]
(% of schools that track)

Tracking in...	5th Grade	6th Grade	7th Grade	8th Grade
All Subjects	23	22	22	23
Some Subjects	40	44	47	50
No Subjects	37	34	31	27

Note: Principals were asked: "For which academic subjects are students assigned to homogeneous classes on the basis or similar abilities or achievement levels?"

textbook. If remedial math classes are provided, those students cover a curriculum heavily centered on basic arithmetic.[14]

Table 2
8th Grade Math Enrollment, 1996[15]

Algebra	24%
Pre-Algebra	27%
8th Grade Math	44%
Other	5%

Note: Students were asked, "What kind of mathematics class are you taking this year?"

Tracking in High Schools

High school systems have changed significantly from the college-general-vocational tracks of yore. They are still distinguished by a hierarchy of coursework, especially in mathematics and English, but two and three track systems and mixed systems with both tracked and heterogeneous classes are prevalent (see Table 3). Typically, students are grouped independently from subject to subject. A student who is a poor reader but strong in mathematics and science, for example, can progress to advanced placement (AP) courses in calculus or physics. The independence of subjects is not pure, however. The vagaries of scheduling may still allow a student's placement in one subject to influence placement in another, and the mere existence of prerequisites can't help but link a student's present and past track levels. Nevertheless, it is more accurate to think of today's tracks as multiple pathways through different disciplines than as a single road winding through the full high school curriculum.[16]

These tracks have diminished their

Table 3
Tracking in High School Mathematics, 1993[17]

School Type	Classification	Course Offerings	% of Schools
A	Traditionally Tracked	3 Tracks	39.1%
B		2 Tracks	18.4%
C	Mixed	3 Tracks + Heterogeneous	10.7%
D		2 Tracks + Heterogeneous	10.4%
E		1 Track + Heterogeneous	7.0%
F	Untracked	Heterogeneous Classes	13.5%

Note: Another study with these data by NCES (1994) finds that when considering whether or not students are allowed to choose classes, only 15% of schools fit the traditionally tracked category.

preoccupation with students' destinations, most notably with deciding who will be prepared for college and who will be prepared for work. The honors track remains focused on college preparation, to be sure, but, invariably, middle and low tracks also declare preparation for college as goals. With enrollment in vocational courses in steep decline, the focus of low tracks has shifted toward academic remediation (see Tables 4 & 5 for two different classification schemes).[18] Classroom studies indicate that low tracks continue to dwell on basic skills, featuring a dull curriculum and inordinate amounts of drill and practice. But such curricular banality may be caused by the lack of interesting materials or good instructional strategies for addressing stubborn learning problems, especially problems persisting into the high school years. Despite remedial students' academic deficiencies, counselors frequently point low track students toward community colleges. The bottom line is that all high school tracks may lead to colleges, albeit to dramatically different types of institutions.[19]

Classroom studies indicate that low tracks continue to dwell on basic skills, featuring a dull curriculum and inordinate amounts of drill and practice.

Another change is that the high track has become more accessible. When principals are asked how they assign students to tracks, they report that completion of prerequisite courses, course grades, and teacher recommendations are the chief criteria, not scores on standardized tests.[20] Parent and student requests are also factored into track placement. More than 80% of schools allow students to elect their course level provided prerequisites have been met, and many schools offer a waiver option for parents who insist, despite the school's recommendation, that their child enroll in a high track class. A degree of self-tracking exists today that was unheard of decades ago.[21]

Schools are also experimenting with alternative pathways to higher level classes. Schools with International Baccalaureate (IB) classes may permit any willing student to enter the program, counting on the well-advertised rigor of IB to keep out those who won't or can't do the work. The "Stretch Regents" course in New York covers the one year curriculum of a traditional Regents course in two years, allowing slower students extra time to master material that they wouldn't see otherwise. In California, the Math A option is advertised as

Table 4
10th Grade Track Enrollment, 1990[22]
(% of students, course classified by track label)

Track	Social Studies	Math	English	Science
Honors	9.9	16.7	11.3	12.2
Academic	52.8	33.0	42.8	38.9
General	30.9	42.6	41.0	44.8
Vocational	3.6	2.4	1.7	1.4
Other	2.8	5.3	3.3	2.7

Note: Teachers were asked: "Which of the following best describes the "track" this class is considered to be? Academic, advanced or honors, general, vocational/technical/business, or other?"

Table 5
10th Grade Track Ability Levels, 1990[23]
(% of students, course classified by ability level)

	Social Studies	Math	English	Science
Above Average	24.6	25.3	29.1	25.6
Average	39.4	41.6	41.5	42.5
Below Average	25.1	18.4	17.7	14.2
Heterogeneous	10.8	14.7	11.6	17.7

Note: Teachers were asked: "Which of the following best describes the achievement level of the 10th graders in this class compared with the average 10th grade student in the school? High achievement levels, average achievement levels, lower achievement levels, or widely differing achievement levels?

providing freshmen who don't qualify for algebra an alternate route to advanced algebra and calculus. The College Board has engineered Equity 2000, an effort to promote minority enrollment in ninth grade algebra and tenth grade geometry. Several urban districts are currently piloting the program.[24]

Not Your Mother's Tracking System

To summarize, today's tracking systems differ from the severely deterministic systems that many people conjure up when they hear the term "tracking." Placement by IQ tests is a thing of the past. The rigidity of tracks has softened, with track assignments usually made on a subject-by-subject basis. Curricular differences still exist, but they have narrowed. Middle and lower level courses join honors classes in focusing on academic work and preparation for college. Some of the barriers to entering high tracks have fallen. Academic performance, as measured by grades and teachers' recommendations, dictates most placements, not scores on standardized tests. And tracking decisions are frequently negotiable. Parents and students who are willing to risk lower grades for a more rigorous education routinely gain access to the courses that they want. These changes helped boost enrollment in the high schools' most challenging courses in the 1980s (see Table 6). The average 1992 graduate, for example, had completed nearly two and one-half years of math at the level of algebra or above, a gain of nearly one full year of coursework since 1982.

This description is not meant to imply that all is rosy when it comes to tracking and ability grouping. Critics would measure the modifications listed here in inches rather than miles. Can outrages still occur? Certainly. A first grader's reading skills might be underesti-

Table 6
Advanced Courses Completed in High School[25]
(graduates of 1982 & 1992)

	1982	1992
Algebra or Higher	1.62	2.41
Chemistry	.34	.58
Physics	.16	.26
Foreign Languages	.96	1.67

Note: Course data are in Carnegie units, a standard form of measurement that represents one credit for the completion of a one-year course.

mated and she may be placed in a low reading group because of the socioeconomic status of her family. A seventh grader who is good at math but at times has a behavior problem might be assigned to a remedial math class, boring him to tears and leading to even worse behavior. A high school senior with a spotless attendance record, who has cheerfully accomplished everything asked of her academically may, because her coursework was confined to vocational classes, graduate with neither the academic skills needed for college nor the work skills needed for modern jobs.

The question is whether inequity and malfeasance are inherent in systems of tracking and ability grouping or arbitrary manifestations of bad practice and human error. Ability grouping is one way of bringing students and curriculum together to produce learning. Making judgments about what students can and can't do and the curriculum from which they will and will not benefit carries real consequences for students. How to best do this hangs over the high school's institutional history.

Section Two: The History of Tracking

By the middle of the 19th century, American schooling was coalescing into local systems stratified by grades and organized around a rational curricular system. The legendary one-room schoolhouse, which in some cases was inhabited by students from two to twenty years of age, experienced a remarkable transformation. To create a more manageable clientele, age restrictions pushed infants and young adults out of the classroom. The curriculum at the time consisted of the books and learning materials that students brought from home. Reformers argued that teaching should instead follow a hierarchical sequence of topics, exposing students to increasingly difficult skills and complex knowledge. In many districts, algebra, for example, and other forms of "higher knowledge," were removed from grammar schools' jurisdiction and reserved for high schools.[26]

The 19th century high school served only a sliver of the teenage population, less than 8% until the 1890s. Private academies housed the teenage children of the well-to-do, but for the average student, whose family needed the income from his or her work, formal schooling ended at eighth grade. As a rule, public high schools administered entrance examinations, and the upper grades of grammar schools, especially in urban areas, provided preparation for these tests. Once in high school, students found that each year of instruction built on learning from previous years. The academic calendar was further divided into smaller curricular units and carefully presented in a logical sequence.

As educational historians have noted, the whole system was shaped like a pyramid. Common schools at the bottom educated the broad mass of American children and the number of persisting students steadily narrowed at each succeeding level.[27] In high school, students were tested annually for advancement in grade. From 1850 on, age-grading gained in popularity, linking grade levels to students' ages, but originally any single grade of the high school could be populated by students of different ages, as long as—and this stipulation bears directly on tracking—the mastery of prior content had been demonstrated. Matching students and curriculum appeared to unfold naturally because each grade level represented an ability group. The curriculum was the master of the high school student's fate. Pupils who learned it graduated to the next grade level. Those who didn't stayed behind or left school altogether.[28]

Tracking at the Turn of the Century

By the dawn of the 20th century, educators had started questioning this arrangement. America's economy was shifting from an agrarian to an industrial base, and the demand for education beyond eighth grade escalated sharply. Students poured into high schools. With immigration also surging, urban schools in particular faced a more numerous and varied clientele. Political opposition to vocational education collapsed, mainly because its main opponent, labor unions, saw the growing number of private schools that offered vocational training as a serious threat to the public school system, an institution they counted on to improve their children's lot in life. Progressive reformers cited an outpouring of studies suggesting that teens leaving school were bored with the high school's academic emphasis. The progressives urged a more practical curriculum aimed at children's interests. Academics debated the virtues of uniformity and differentiation in the curriculum, and careers were built by championing one side or the other in this debate.[29]

The 20th century's comprehensive high school emerged from this cauldron of political, social, economic, and intellectual upheaval, housing within it distinct curricular tracks but promising a common set of educational experiences and a single diploma for all graduates. Entrance exams tottered and fell, and high schools gradually accepted all comers. The lines of stratification for students had shifted: from distinctions drawn by the highest grade level one attained, or by whether one even attended high school, to distinctions emanating from the track one belonged to within high school.

This structure guided the high school's evolution into a mass institution over the next several decades. It was not without faults. Social Darwinists and racial segregationists twisted to their own ends the idea that schools should tailor activities more closely to the characteristics of students, insisting that children of different races and economic classes needed vastly different forms of education to prepare them for their rightful stations in life. Tracking was used as a tool of discrimination, especially during the Depression years, when students who might otherwise have been working poured into high schools by the thousands. Tests measuring IQ and academic achievement lent legitimacy to the task of placing students in tracks—and were used with both humane and pernicious intentions.[30]

By mid-century the high school had become so internally fragmented that it resembled, in one group of researchers' memorable metaphor, the modern shopping mall.

There were also misguided attempts to fashion the curriculum around students' personal needs. In the 1940s, the "life adjustment" movement convinced many districts to forego academically rigorous content for courses on dating, personal grooming, housekeeping, and other practical topics. At its zenith, this reform movement was so blatantly anti-intellectual that one high school principal publicly lamented that 30% of his students wasted their time by taking academic courses.[31] Modern education promised something for everyone. Sporting a curricular menu packed with academic, quasi-academic, and non-academic electives, by mid-century the high school had become so fragmented that it resembled, in one group of researchers' memorable metaphor, the modern shopping mall.[32]

Sputnik and The Great Society

A flurry of criticism and the Russian launch of Sputnik forced a reconsideration. Suddenly, Americans fretted that students weren't working hard enough, weren't learning enough, and weren't keeping pace with pupils abroad. In the 1960s, programs for gifted youngsters flourished, especially in math and science. The Great Society heightened concern about racial discrimination, poverty, and social inequality, spotlighting students who were badly served by the school system and giving birth to a multitude of programs that offered a helping hand. All of these programs—gifted education, special education, compensatory education, bilingual programs—targeted specific categories of students. Categorical programs institutionalized the conviction that any standardized education would shortchange youngsters with extraordinary needs. As categorical programs gained legal backing, their own administrative structures, and their own funding streams, the comprehensive high school grew more internally differentiated.[33]

The Pendulum Swings Again

In the latter half of the 20th century, differentiation in the form of tracking came under fire. In books such as James Rosenbaum's (1976) *Making Inequality*, Samuel Bowles and Herbert Gintis's (1976) *Schooling in Capitalist America*, John Goodlad's (1984) *A Place Called School*, and Jeanne Oakes's (1985) *Keeping*

Track, critics assailed tracking for reproducing and exacerbating social inequalities.[34] They pointed out that poor, non-English speaking, and minority youngsters were disproportionately assigned to low tracks and wealthier, white students to high tracks—and concluded that this was not a coincidence. Oakes's book helped ignite a firestorm of anti-tracking activity. Tracking was blamed for unfairly categorizing students, stigmatizing struggling learners, and consigning them to a fate over which neither they nor their parents had control. The indictment spread from scholarly journals to the popular press. A 1988 article in *Better Homes and Gardens* asked, "Is Your Child Being Tracked for Failure?" In 1989, *Psychology Today* ran "Tracked to Fail" and *U.S News and World Report* published "The Label That Sticks."[35] Although the anti-tracking movement's left-leaning political base conflicted with that of the movement for rigorous academic standards, parental choice, and other grassroots proposals that gained popularity in the late 1980s, it managed to hitch its wagon to growing public demand for excellence in the public schools.

To sum up, the school system's historical search for the best way of organizing students and curriculum has never produced a method immune from criticism. The contemporary indictment of tracking boils down to the contention that ability grouping systems are inefficient and unfair, that they hinder learning and distribute learning inequitably. These complaints command center stage in the research on tracking and ability grouping.

Section Three: The Research

The research on tracking and ability grouping is frequently summarized in one word: inconclusive. This pronouncement is accurate in that nearly a century's worth of study has failed to quantify the impact of tracking and ability grouping on children's education. It doesn't necessarily mean, however, that the gallons of ink spilled on these issues have been much ado about nothing. A non-effect in educational research is quite common. It can mean that the practice under study is truly neutral vis-a-vis a particular outcome. But it can also mean that the practice has off-setting negative and positive effects, that positive effects are produced under some conditions and negative effects under others, or that effects occur that researchers either don't measure, because they're measuring something else, or can't measure, because of inadequate methods or expertise.

Non-findings must be interpreted with great care, especially when looking for policy guidance. In 1966, a federal report was released that many scholars consider the single most famous study in the history of education, *Equality of Educational Opportunity*, otherwise known as the Coleman Report for its primary author, the famed sociologist James Coleman. The Coleman Report was widely interpreted as finding that schools themselves have no significant effect on student learning. Fortunately, policymakers did not rush out to close schools and turn them into car washes or something else more useful.

I will review the research on tracking and ability grouping by first surveying what is known about its effect on academic achievement and then examining the evidence on five of the most serious charges leveled against tracking.

Achievement

Tracking's non-effect on achievement can be appreciated by contrasting the conclusions of two prominent analysts, Robert Slavin, a critic of tracking, and James G. Kulik, a defender of some forms of tracking and ability grouping. Both have conducted meta-analyses of tracking and ability grouping. A meta-analysis is essentially a study of studies. The analyst pools the existing studies that meet certain criteria for quality and statistically summarizes their conclusions. As an indication of the massive amount of material with which a meta-analysis on this topic begins, Kulik's initial search uncovered over 700 studies on tracking and ability grouping.

First, the points of agreement. Slavin and Kulik agree that studies of within-class ability grouping are positive, with Slavin's support largely resting on the benefits uncovered for grouping in mathematics in the upper grades of elementary school. They also agree that cross-grade ability grouping boosts achievement in elementary schools. The most popular form of this approach, the "Joplin Plan," originated in Joplin, Missouri in the 1950s. In short, Slavin and Kulik validate the most widely used forms of ability grouping at the elementary level. Ability grouping promotes achievement, and no particular group of children—high, middle, or low ability—misses out on the gain (see the Appendix).

The analysts diverge on between-class grouping, or tracking. Because the national debate, like the Slavin-Kulik debate, focuses so intensely on tracking, and because there are several facets of the practice that are controversial, I will confine the remainder of this discussion to the tracking research.

Slavin and Kulik basically agree that "XYZ" grouping plans have no significant effect on learning. A species of tracking, this scheme gets its name from Detroit's XYZ program, which began in 1919. In most of the XYZ studies, schools ranked students by IQ test or some other omnibus test of ability, grouped the students into separate classes (in Detroit, labeled X, Y and Z), and taught an identical curriculum to all three groups. The XYZ students' achievement was then compared to that of similar students in ungrouped classes. Taken as a whole, the best XYZ studies show no difference between ability grouped and ungrouped students.[36]

Slavin concludes from this evidence that tracking has no effect on achievement. Kulik points out that XYZ bears little resemblance to the way most schools use tracking in the real world. Schools typically use tests that measure achievement in specific disciplines to ability group students in each subject. They no longer use IQ tests or the other omnibus measures that were used to form XYZ groups. And students are assigned to tracks for the express purpose of adjusting the curriculum to students' ability. Since all levels of XYZ typically studied an identical curriculum, Kulik argues that its negligible effect on achievement is not surprising.[37]

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Pursuing this line of inquiry, Kulik finds that tailoring course content to ability level yields a consistently positive effect on the achievement of high ability students. Academic enrichment programs produce significant gains. Accelerated programs, where students tackle the curriculum of later grades, produce the largest gains of all. Accelerated gifted students dramatically outperform similar students in non-accelerated classes. Slavin omits studies of these programs from his analysis. He argues that the gains, though large, may be an artifact of the programs' selection procedures, that schools admit the best students into these programs and reject the rest, thereby biasing the results.[38]

Three things are striking about the Slavin-Kulik debate. First, the disagreement hinges on whether tracking is neutral or beneficial. Neither researcher claims to have evidence that tracking harms achievement, of students generally or of students in any single track. Second, accepting Slavin or Kulik's position on between-class grouping depends on whether one accepts as legitimate the studies of academically enriched and accelerated programs. Including these studies leads Kulik to the conclusion that tracking promotes achievement. Omitting them leads Slavin to the conclusion that tracking is a non-factor.

Third, in terms of policy, Slavin and Kulik are more sharply opposed on the tracking issue than their other points of agreement would imply. Slavin states that he is philosophically opposed to tracking, regarding it as inegalitarian and anti-democratic. Unless schools can demonstrate that tracking helps someone, Slavin reasons, they should quit using it. Kulik's position is that since tracking benefits high achieving students and harms no one, its abolition would be a mistake.

More meta-analyses will not resolve this philosophical dispute. Furthermore, the XYZ studies that Slavin and Kulik are scrutinizing fall short of providing a clear policy direction. The studies vary on critical dimensions, and important variables go unreported.[39] Actually, we don't know a lot about the education children received in the studies—in either the grouped or the ungrouped settings. Moreover, virtually all of the studies that Slavin and Kulik reviewed were conducted before 1975. The structural changes that have occurred in tracking since then are not represented in the XYZ literature. School people can't search through this mass of research, find a school that has similar practices to their own, and

figure out whether their school's tracking system is good or bad or how it can be improved.

National Data

In the last two decades, researchers have also analyzed large national surveys to evaluate tracking. High School and Beyond (HSB) is a study that began with tenth graders in 1980. The National Education Longitudinal Study (NELS) started with eighth graders in 1988. These two studies followed tens of thousands of students through school, recording their academic achievement, courses taken, and attitudes toward school. The students' transcripts were analyzed, and their teachers and parents were interviewed. The two massive databases have sustained a steady stream of research on tracking.

Three findings stand out. High track students in HSB learn more than low track students, even with prior achievement and other pertinent influences on achievement statistically controlled. Not surprising, perhaps, but what's staggering is the magnitude of the difference. On average, the high track advantage outweighs even the achievement difference between the student who stays in school until the senior year and the student who drops out.[40]

The race gap reaches its widest point right after elementary and middle school, when students have experienced ability grouping in its mildest forms. The gap remains unchanged in high school, when tracking between classes is most pronounced.

The second major finding is that race and tracking are only weakly related. Once test scores are taken into account in NELS, a student's race has no bearing on track assignment. In fact, African-American students enjoy a 10% advantage over white students in being assigned to the high track. This contradicts the charge that tracking is racist. Considered in tandem with the high track advantage just described, it also suggests that abolishing high tracks would disproportionately penalize African-American students, especially high achieving African-American students. Moreover, NELS shows that achievement differences between African-American and white students are fully formed by the end of eighth grade. The race gap reaches its widest point right after elmentary and middle school, when students have experienced ability grouping in its mildest forms. The gap remains unchanged in high school, when tracking between classes is most pronounced.[41]

Third, NELS identifies apparent risks in detracking. Low achieving students seem to learn more in heterogeneous math classes, while high and average achieving students suffer achievement losses—and their combined losses outweigh the low achievers' gains. In terms of specific courses, eighth graders of all ability levels learn more when they take algebra in tracked classes rather than heterogeneously grouped classes. For survey courses in eighth grade math, heterogeneous classes are better for low achieving students than tracked classes.[42]

These last findings are important because we don't know very much about academic achievement in heterogeneous classes. When the campaign against tracking picked up steam in the late 1980s, tracking was essentially universal. Untracked schools didn't exist in sufficient numbers to evaluate whether abandoning tracking for a full regimen of mixed ability classes actually works. The NELS studies that attempt to evaluate detracked classes, which thus far have been restricted to mathematics, point toward a possible gain for low achieving students and a possible loss for average and above average students, but these findings should be regarded as tentative.[43]

To summarize what we know about abil-

ity grouping, tracking, and achievement: The elementary school practices of both within-class and cross-grade ability grouping are supported by research. The tracking research is more ambiguous but not without a few concrete findings. Assigning students to separate classes by ability and providing them with the same curriculum has no effect on achievement, positive or negative, and the neutral effect holds for high ,middle, and low achievers. When the curriculum is altered, tracking appears to benefit high ability students. Heterogeneous classes appear to benefit low ability students but may depress the achievement of average and high achieving students.

Fosters Race and Class Segregation?

Critics charge that tracking perpetuates race and class segregation by disproportionately assigning minority and poor children to low tracks and white, wealthy children to high tracks. When it comes to race, the disparities are real, but, as just noted, they vanish when students' prior achievement is considered. A small class effect remains, however. Students from poor families are more likely to be assigned to low tracks than wealthier students with identical achievement scores. This could be due to class discrimination, different amounts of parental influence on track assignments, or other unmeasured factors.[44]

The issue ultimately goes back to whether tracking is educationally sound. Those who complain of tracking's segregative impact do not usually attack bilingual or Title I programs for promoting ethnic and class segregation, no doubt because they see these programs as benefiting students. If low tracks remedied educational problems, the charge of segregation would probably dissipate. Does tracking harm black students? A telling answer is found in African-American parents' attitude toward tracking. A study conducted by the Public Agenda Foundation found that "opposition to heterogeneous grouping is as strong among African-American parents as among white parents, and support for it is generally weak."[45] If tracking harmed African-American students, one would not expect these sentiments.

When the curriculum is altered, tracking appears to benefit high ability students. Heterogeneous classes appear to benefit low ability students but depress the achievement of average and high achieving students.

Harms Self-Esteem?

Little research indicates that tracking harms students' self-esteem. In fact, the evidence tilts slightly toward the conclusion that low ability students' self-concept is strengthened from ability grouping and tracking, although the effect is insignificant. The public labeling of low track students may cause embarrassment, but the public display of academic deficiencies undoubtedly has a similar effect in heterogeneous classrooms. There, a low ability student's performance is compared daily to that of high-achieving classmates.[46]

Locks Students In?

It would be reprehensible if students were denied the opportunity to move up in track or denied, in the tracking critics' phrase, "access to knowledge," the learning that gets students into college and ultimately betters their lives. Data on this issue are difficult to interpret. Mobility rates tell us how much movement occurs, but they don't answer the key question of whether that movement is warranted. For some students, keeping them in the same group year after year may be wise, while for others, moving them up or down in group may be the educationally prudent decision.

How much mobility takes place? A study of transcripts from five Maryland high schools showed 59.9% of students changed math levels during their high school careers, 65.4% in science. A national survey of high school principals reports substantial movement among tracks, especially upward (see Table 7). But an analysis of NELS data found that only 16.5% of students who were in low-ability classes in 8th grade went on to take either geometry or Algebra II by 10th grade (in comparison to 81.0% of 8th graders in high-ability classes). The results in science were not so dismal, with 61.7% of students in low-ability eighth grade science able to complete biology or chemistry by 10th grade.[47] These data suggest that substantial movement among groups and tracks occurs. That being said, a disturbing number of students never emerge from the low track. Even where the opportunity to move up and out of low tracks exists, the qualities that one must have to seize this opportunity—strong achievement motivation, independence, and drive—may be lacking in many low track students. Without a push, a lot of students remain in low tracks who are capable of moving up.

High Track Privilege?

Critics of tracking charge that high tracks get more resources than low tracks. Detailed data on school budgets are sparse, and inconsistent expense categories render them almost impossible to compare across schools. It appears that high tracks are taught by better qualified teachers, however, in the sense of having teachers more schooled in content knowledge.[48] High school principals are inclined to assign teachers who know advanced subject matter to teach advanced subjects. As pointed out by high track defenders, the alternative is unattractive. Does it advance the cause of equity to have teachers with advanced degrees in mathematics teach basic arithmetic while teachers without a single college math course teach calculus? A better solution is to insist that all students take more challenging classes and to staff these classes with well-qualified teachers.[49]

Dead-End Curricula of Low Tracks

Reba Page's 1991 study, *Lower Track Classrooms*, painstakingly reports on the daily activities of eight low track classes, documenting how they often function as caricatures

Table 7
Change in Track Level After Grade 10, 1993[50]
(Percent of schools)

Subject	Direction	Almost Never	Rarely	Sometimes	Often
Math	Moved Up	12	27	47	14
Math	Moved Down	16	33	50	2
English	Moved Up	17	23	46	14
English	Moved Down	26	34	39	1

Note: Principals were asked: "How often are students changed to a higher [lower] ability course after completion of 10th grade?"

of high tracks, how teachers and students in low tracks make deals to not push each other too hard so that they can cope with their environment. Low tracks may be used as holding tanks for a school's most severe behavior problems. Even under the best of conditions, low tracks are difficult classrooms. The low tracks that focus on academics often try to remediate through dull, repetitious seatwork. This is not to disparage the low track teacher. Research has yet to discover any magic bullets for alleviating tough learning problems or the destructive behaviors that students often exhibit along with them.

A judicious tracking system teaches low track students what they need to know and moves them out of the low track as quickly as possible.

Intellectually stimulating low track classrooms do exist, however, and researchers have found the most productive of them in Catholic schools. Margaret Camarena and Adam Gamoran have described low track classrooms where good teaching, lively discussions, and ample learning take place. In 1990, Linda Valli published her study of a heavily tracked Catholic high school in an urban community. The school's course designations publicly proclaimed each student's track level. Textbooks and instruction were adapted for each track. Yet Valli discovered that "a curriculum of effort" permeated the entire school, even the lowest tracks. The school culture centered around academic progress, and the tracking system was but another facet of the school that served this aim. Students of all abilities were aggressively pushed to learn as much as they could. Every year, low track students were boosted up a level. By the senior year, the lowest track no longer existed. A judicious tracking system teaches low track students what they need to know and moves them out of the low track as quickly as possible.[51]

Section Four: Principles for Future Policy

Serious charges have been made about tracking and ability grouping, especially tracking. Several states and districts have pushed schools to abolish tracking, and a storm of controversy has ensued. In recent years, tracking and ability grouping have come under increased fire for (1) being inefficient, that is, for not promoting academic achievement, and for (2) being inequitable, i.e., for condemning low group and low track students, and especially poor students and students of color, to impoverished educational settings.

These charges are mostly unsubstantiated by research. The evidence does not support the charge that tracking is inherently harmful, and there is no clear evidence that abandoning tracking for heterogeneously grouped classes would provide a better education for any student. This being said, tracking's ardent defenders cannot call on a wealth of research to support their position either. The evidence does not support the claim that tracking benefits most students or that heterogeneous grouping significantly depresses achievement. High achieving students are the exception. For them, tracked classes with an accelerated or enriched curriculum are superior to heterogeneously grouped classes.

Based on the foregoing analysis, I offer three principles to guide future policy making on tracking and ability grouping. I also furnish some suggestions derived from these principles. The suggestions are admittedly speculative, as they must be, given the limitations of the evidence.

1. Schools Should Decide Policy

Individual schools must have the latitude to make decisions about the best way to educate students, including whether tracking, ability grouping, or heterogeneous grouping works best for their pupils. In classrooms, where learning depends upon a multitude of factors, some within educators' control, and many not. Teachers and principals are in the best position to structure the learning environment so that it works well because they know their students better than policymakers sitting many miles away. Managing instruction by remote control rarely succeeds.[52]

Tracking's critics see school governance differently. Robert Slavin states, "Given the antidemocratic and antiegalitarian nature of ability grouping, the burden of proof should be on those who would group rather than on those who favor heterogeneous grouping, and in the absence of evidence that grouping is beneficial, it is hard to justify continuation of the practice."[53] Jeannie Oakes urges federal and state mandates and court orders to force reluctant schools to detrack. "The reality in many school districts," she writes, "is that much needed equity-minded reforms will not come about if the decision is left to local policymakers. State and federal level policymakers (as well as the courts) have an obligation to step in and protect underserved (generally poor and minority) students."[54]

Equity is a paramount principle of social institutions, but schools do more than dispense a public good. They also serve families. Parents will no more tolerate schools that give short-shrift to individual learning needs than they will tolerate hospitals that give short-shrift to individual health needs. And schools are also workplaces where educators exercise professional judgment to the best of

their abilities. The idea that schools must defend activities that research can't verify invites promiscuous policymaking. Schools do lots of things that research hasn't validated. Sometimes this is a failing of schools. Sometimes it's a failing of research. Issuing report cards with grades, assigning homework, suspending students for disciplinary reasons—these are all activities that draw distinctions among children and impose unequal burdens on them. They are also routine school practices that research has been unable to declare unequivocally good or bad.

Non-effects in research should not invite policymakers (or researchers) to impose a particular ideology or educational philosophy on local schools. No evidence indicates that abruptly and universally abolishing tracking would help anyone. It may even harm the students it is intended to benefit. Proclamations that tracking is undemocratic, inequitable, or educationally unsound cannot be reconciled with the non-effects found by research. Polls indicate that parents, teachers, and students support tracking. That part of democracy that premises governmental action on the preferences of the governed stands in favor of tracking's use. Moreover, the intervention advocated by Jeannie Oakes, attempting to dictate schools' operations and procedures from courtrooms and legislative arenas, is rapidly going the way of the dinosaur. Results are now assuming a dominant role in public policy. In this spirit, states and districts should establish clear expectations for achievement, judge schools by whether they attain them, and leave decisions about tracking and ability grouping to teachers, parents, and principals. Some schools will track, others will untrack.[55]

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2. Improve Tracked Schools

What's important are schools' accomplishments in teaching young people. It is the tracked school's responsibility to make tracking work well and to work well for all students. The low track is the aspect of tracking that draws the most criticism, and that's where schools should focus their energies for improvement. Low tracks should be small, well-managed by teachers who are competent in their subjects, monitored closely by administrators, and relentlessly focused on academics. The success of low tracks in Catholic schools needs to be investigated further and replicated. Schools can also locate successful low track classrooms in their own communities, in both public and private schools, and learn a great deal from them. To promote mobility upward in tracks, schools should clearly communicate pre requisites for high tracks to their feeder schools, provide bridge courses (perhaps in summer school) that allow students to move up in track level, and offer challenge exams for track entry, where students can demonstrate sufficient preparation for more difficult coursework. Low functioning students should be scheduled into double periods of the subjects in which they need intensive help.

Many urban schools offer no IB or advanced placement courses. Every school's highest track in English, math, history, and science should end with a senior-year AP class. If some schools have insufficient numbers of qualified AP students, districts should pool several schools' students, offer AP at a central location, schedule the course at the beginning or end of

the school day, and provide transportation so that qualified students may attend. A high track in an inferior school benefits no one.

3. Learn More About Untracked Schools and Improve Them

To make their case more persuasively, advocates of tracking's abolition need a substantial number of untracked schools that they can point to as successes. They also need a reliable body of research showing that the evils attributed to tracking don't also plague heterogeneously grouped classrooms.[56] With untracked schools now in greater abundance, well-designed studies should be conducted to assess whether they can deliver on the promise of both equity and high achievement. The last study with random assignment of students to ability grouped and ungrouped classes was conducted in 1974.[57] There has never been an experimental study that assigned students to tracked and untracked schools and followed them for several years. We need to learn much more about untracked schools, and having more of them now should allow us to do that.

On the political side, anti-tracking advocates need to assuage the fears of parents that detracked schools will sacrifice rigorous academic training and intellectual development for a dubious social agenda.

On the political side, anti-tracking advocates need to assuage the fears of parents, especially parents of high achieving youngsters, that detracked schools will sacrifice rigorous academic training and intellectual development for a dubious social agenda. A report describing ten middle schools and high schools engaged in tracking must make chills run down the spines of parents. It describes these schools as "rethinking what it means to be smart," uprooting AP classes (they're not engaging or inquiry-based enough), and challenging "suburban norms" and "powerful school and societal norms of individualism and competition." Parents who question tracking's segregative effect will undoubtedly have a hard time understanding why they should applaud untracked middle schools that offer elective courses (such as African-American or Mexican-American History, African-American or Latin-American Literature, Ethnic Literature, and Women's Literature) that segregate the curriculum and probably students.[58]

A final point. The politics of tracking have generated intense debate for over seventy years. More than 700 studies have not succeeded in quelling the controversy. The simple question of whether ability grouping and tracking are better or worse than heterogeneous grouping remains unanswered. More research should be conducted on this question, of course. We have much to learn. But we also need to realize that another 700 studies and seven decades of debate may not resolve the issue.

We shouldn't permit the tracking debate to sidetrack the national effort to raise the quality of education for all students. American education now includes both tracked and untracked schools. The principles for policy outlined here recognize that fact. We should allow schools to decide their own practices, strive to improve tracked schools, and find out more about untracked schools so they too may be improved. The next generation of research and policy should concentrate on providing a better education in both tracked and untracked settings.

Appendix

Impact of Grouping on Achievement Effect Sizes of Kulik[59] and Slavin[60] Meta-Analyses				
Type of Grouping	Level	Subject	Kulik	Slavin
Within-Class Ability Grouping	Elementary	Reading, math	+.25 { H +.30 M +.18 L + .26	+.34 { H +.41 M +.27 L +.65
Cross-Grade Ability Grouping (Joplin)	Elementary	Reading	+.30	+.45
Between-Class Tracking (XYZ)	Secondary	All academic	+ .03 { H +.10 M -.02 L -.01	+ .00 { H +.01 M -.08 L -.02
Enriched, Gifted & Talented	Both	All academic	+.41	NA
Accelerated, Gifted & Talented	Both	All academic	+.87	NA

Note: Level and Subject refer to typical school level and subject where type of grouping is used. H, M, and L refer to effect on High, Medium, and Low ability students. Effect sizes are statistical measures of variation. Positive effects indicate a gain, negative effects indicate a loss, and a zero effect is neutral. Generally speaking, effect sizes with absolute values around .20 are considered small, medium when around .50, and large if .80 or greater.

Notes

[1] The list of groups condemning tracking comes from a foreward written by Jeannie Oakes to the book by Anne Wheelock, *Crossing the Tracks: How Untracking Can Save America's Schools* (New York: The New Press, 1992), p. xi. Several studies conducted by the Public Agenda Foundation report sentiments on tracking and heterogeneous grouping. When professors of education were asked whether they'd like to see more or less mixed ability grouping in K-12 classrooms, 50% said more, 15% less; in Steve Farkas and Jean Johnson, 1997, *Different Drummers: How Teachers of Teachers View Public Education*, (New York: Public Agenda Foundation, 1997), p. 32. Only 34% of the public and 40% of teachers believe heterogeneous grouping will improve education; in S. Farkas and J. Johnson, 1996, *Given the Circumstances: Teachers Talk about Public Education Today* (New York: Public Agenda Foundation, 1996), p. 41. Parental opposition to heterogeneous grouping is reported in *First Things First: What Americans Expect from the Public Schools* (New York: Public Agenda Foundation, 1994). High school students' support for more ability grouping is reported in *Getting By: What American Teenagers Really Think About Their Schools* (New York: Public Agenda Foundation, 1997). A survey conducted during the Howard County, MD controversy found that two thirds of middle school teachers, three-fourths of students, and almost three-fourths of parents thought students learn better with classmates of similar ability. See Katherine Shaver, "Middle Schools Wrestle with Complaints About Levels of Learning," *Washington Post* (9/4/97), p. M1.

[2] Steve Bates, "Academic Mixing Stirs Pot in Alexandria," *Washington Post* (1/31/93), p. B5.

[3] Christine Dempsey, "Students of All Abilities Mixed As Parents Fume," *Hartford Courant* (7/25/94), p. A1.

[4] Peter Maass, "Study of Howard Middle Schools Criticizes Focus on Self-Esteem," *Washington Post* (10/11/96), pp. B1 & B7.

[5] Lori Olszewski, "Teacher Union Sues Livermore District: Suit Says Principal Stifled Discussion Over Curriculum," *San Francisco Chronicle* (6/13/97) p. A13.

[6] See J. E. Rosenbaum, *Making Inequality* (New York: Wiley, 1976); W.E. Shafer and C. Olexa, *Tracking and Opportunity* (Scranton, PA: Chandler, 1971); B. Heyns, "Selection and Stratification Within Schools," *American Journal of Sociology* 79, 6 (1974): 1434-51.

[7] In a study of twenty Baltimore schools conducted in the 1980s, only one school reported that it didn't use ability grouping in reading. See Aaron M. Pallas, Doris R. Entwisle, Karl L. Alexander, and M. Francis Stluka, "Ability-Group Effects: Instructional, Social, or Institutional?" *Sociology of Education*, 67, 1 (1994): 27-46. An extremely high estimate of between-class tracking in elementary schools can be found in a Pennsylvania study conducted by researchers from Johns Hopkins University. In the study, 45% of first grades used between-class homogeneous grouping in English and about 15% in math. Between-class tracking in English rose to over 60% by grade four. This is by far the highest estimate of tracking in elementary schools I have seen. But the data should be taken with a grain of salt. The same survey shows nearly 80% of first graders remained in the same class all day, which makes between-class ability grouping in several subjects nearly impossible. Then, the survey shows 90% of first grades using within-class ability grouping in reading and over 20% in math. If these estimates are all accurate, then one thing is for sure: an awful lot of grouping is going on Pennsylvania. See James M. McPartland, J. Robert Coldiron, and Jomills H. Braddock II, *School Structures and Classroom Practices in Elementary, Middle, and Secondary Schools*, Report No. 14 (Baltimore, MD: Center for Research on Elementary & Middle Schools, 1987).

[8] The creation of ability groups is explained in Robert Dreeben and Rebecca Barr, "The Formation and Instruction of Ability Groups," *American Journal of Education*, 97, 1 (1988): 34-65. Also see Maureen Hallinan and Aage B. Sorensen, "The Formation and Stability of Instructional Groups," *American Sociological Review*, 48 (1983): 838-51.

The charge that ability grouping promotes race and class discrimination sometimes surfaces in case studies, notably, Ray C. Rist, "Student Social Class and Teacher Expectations: The Self-Fulfilling Prophecy in Ghetto Education," *Harvard Education Review*, 40, 3 (1970): 411-451. But race and class have been found to be insignificant student charactersitics in teachers' assignment of pupils to reading groups when data are collected and analyzed employing proper statistical controls. See Emil J. Haller and Sharon A. Davis, "Does Socioeconomic Status Bias the Assignment of Elementary School Students to Reading Groups?" *American Educational Research Journal*, 17,4 (1980): 409-418. Emil J. Haller, "Pupil Race and Elementary School Ability Grouping: Are Teachers Biased Against Black Children?" *American Educational Research Journal*, 22, 4 (1985): 464-83.

[9] Rebecca Barr and Robert Dreeben, *How Schools Work* (Chicago: University of Chicago Press, 1983), p. 97.

[10] Joyce L. Epstein and Douglas J. MacIver, *Education in the Middle Grades: Overview of National Practices and Trends* (Baltimore: Center for Research on Elementary and Middle Schools, 1990). Another survey, the Longitudinal Study of American Youth (LSAY), includes data on science and math curricula from 51 middle schools from 1987 to 1989. In science, 38% of schools tracked in 7th grade and 49% in 8th grade. In math, 81% tracked in 7th grade and 92% in 8th grade. See Thomas B. Hoffer, "Middle School Ability Grouping," *Educational Evaluation and Policy Analysis*, 14, 3 (Fall, 1992): 205-227. Surveys of middle school tracking in the 1990s in two states promoting tracking reform, California and Massachusetts, are presented in Tom Loveless, *The Fate of Reform: Why Some Schools Track and Other Schools Don't* (forthcoming).

[11] Parent interventions into tracking decisions are potential sources of inequality. Highly educated parents have been found more likely to push for high track placements than other parents. See Elizabeth L. Useem, "Middle Schools and Math Groups: Parents Involvement in Children's Placement," *Sociology of Education*, 65, 4 (October 1992): 263-279.

[12] Joyce Epstein and Douglas J. MacIver, *Education in the Middle Grades*. Some middle schools start with self-contained classrooms the first year and then move students to departmentalized or team structure in the second year. See Tom Loveless, *The Fate of Reform*.

[13] Jomills Henry Braddock II, "Tracking the Middle Grades: National Patterns of Grouping for Instructions," *Phi Delta Kappan*, 71, 6 (February 1990): 445-449. Adapted from Table 1, p. 446. Data from a representative national sample of 1,753 schools, *Education in the Middle Grades: A National Survey of Practices and Trends*, a study conducted by the Johns Hopkins University Center on Elementary and Middle Schools, spring 1988.

[14] Many middle schools are abolishing remedial classes in response to the middle school reform movement, which champions heterogeneously grouped classes.

[15] Catherine A. Shaughnessy, Jennifer E. Nelson, and Norma A. Norris, *NAEP 1996 Mathematics: Cross-State Data Compendium for the Grade 4 and Grade 8 Assessment* (Washington, D.C.: U.S. Department of Education, 1998). Data from Table 6.26, pp. 167-168.

[16] See Bruce L. Wilson and Gretchen B. Rossman, *Mandating Academic Excellence: High School Responses to State Curriculum Reform* (New York: Teachers College Press, 1993), pp. 86-87. In this study of transcripts from five Maryland high schools, only 35% of student movement among math tracks mirrored that of science tracks, indicating that science and math placements are largely independent. The authors caution, however, that the data could contain "noise" (p. 88).

[17] Jennifer S. Manlove and David P. Baker, "Local Constraints on Opportunity to Learn Mathematics in High School," in ed. Maureen T. Hallinan, *Restructuring Schools: Promising Practices and Policies* (New York: Plenum, 1995), pp. 133-153. Allowing students and parents to choose track levels may create its own problems. Highly motivated

students will choose more rigorous courses than less motivated students. Bryk, Lee, and Holland argue that the distribution of achievement is more equitable in Catholic high schools than in public high schools because Catholic schools limit students' course options; Anthony S. Bryk, Valerie E. Lee, and Peter B. Holland, *Catholic Schools and the Common Good* (Cambridge: Harvard University Press, 1993).

[18] Tables 4 and 5 illustrate that track designations depend on the survey question that is asked. The data in both tables were collected from teachers in NELS.

[19] As shown in Table 4, the NELS 10th grade (1990) enrollment in vocationally-oriented courses within academic subject areas was miniscule. This does not reflect enrollment in electives, shop classes or classes in computer programming, business, or other vocational skills. When the NELS students were asked in 12th grade (1992) whether they were in a general, college preparatory/academic, or vocational program, 45% said they were in a general program, 43% college preparatory/academic, and 12% vocational. Why the drop in college prep students and rise in vocational students from 10th to 12th grade? Possible reasons include discrepancies from sampling teachers in 10th grade and students in 12th, changes in student's plans as high school graduation approached, or students regarding electives, where they are allowed to take non-academic courses, as the signature elements of their program. On the issue of counseling low track students, Rosenbaum found counselors misleading low track students as to their prospects for college; J. E. Rosenbaum, *Making Inequality* (New York: Wiley, 1976).

[20] National Center for Education Statistics, *Curricular Differentiation in Public High Schools* (Washington, D.C.: U.S. Department of Education, 1994), Table 13. Principals were asked to rate influences on the placement of students into differentiated courses. The top five responses, and percent responding that the particular factor is influential to a "great extent:"
1) Prerequisite courses taken, 66%; 2) Teachers' recommendations, 57%; 3) Students' previous grades, 52%;
4) Parents' requests, 34%; 5) Students' requests, 34%. Only 14% of principals said standardized test scores were influential to a great extent.

[21] Adapted from Jennifer S. Manlove and David P. Baker, *Local Constraints*, Table 3, p. 145. Data from a representative national sample of 912 schools, *National Survey of High School Curricular Options*, conducted for the National Center for Education Statistics, fall 1993.

[22] Daniel I. Rees, Laura M. Argys, and Dominic J. Brewer, "Tracking in the United States: Descriptive Statistics from NELS," *Economics of Education Review*, 15, 1 (1996): 83-89.

[23] Rees, et al. "Tracking in the United States."

[24] Adam Gamoran, Andrew C. Porter, John Smithson, and Paula White, "Upgrading High School Mathematics Instruction: Improving Learning Opportunities for Low-Achieving, Low-Income Youth," *Educational Evaluation and Policy Analysis* (Winter 1997), 19, 4: 325-338. Preliminary findings of *Equity 2000's* effect on enrollment in advanced courses and on course grades is described in Howard T. Everson and Marlene D. Dunham, "Effects of *Equity 2000* on Student Achievement in Mathematics," paper presented at the Annual Meeting of the American Educational Research Association, San Diego, April 1998.

[25] National Center for Education Statistics, *Digest of Education Statistics* (Washington, D.C.: U.S. Department of Education, 1998). Data from Table 133.

[26] William J. Reese, *The Origins of the American High School* (New Haven: Yale University Press, 1995). David L. Angus, Jeffrey W. Mirel, and Maris Vinovskis, "Historical Development of Age-Stratification in Schooling," *Teachers College Record*, 90, 2 (Winter 1988): 211-236.

[27] David Tyack and Larry Cuban, *Tinkering Toward Utopia* (Cambridge: Harvard University Press, 1995), pp. 69-70.

[28] Selwyn K. Troen, *The Public and the Schools: Shaping the St. Louis System, 1838-1920* (Columbia,Missouri: University of Missouri Press, 1975).

[29] Troen, *The Public and the Schools*. Paul E. Peterson, *The Politics of School Reform, 1870-1940* (Chicago: University of Chicago Press, 1985). Lawrence A. Cremin, *The Transformation of the School* (New York: Vintage Books, 1961).

[30] The essentially academic character of most students' high school educations wasn't undermined until the Great Depression. See Jeffrey Mirel, book review of The Once and Future School: Three Hundred and Fifty Years of American Secondary Education, *American Journal of Education*, 106, 2 (February 1998): 334-340. Also see the historical data on coursetaking in David Angus and Jeffrey Mirel, "Rhetoric and Reality: The High School Curriculum," in eds. Diane Ravitch and M. Vinovskis, *Learning from the Past* (Baltimore: Johns Hopkins University Press, 1995): 295-328. On the abuse of IQ testing with minority and working class children, see Stephen Jay Gould, *The Mismeasure of Man* (New York: W.W. Norton, 1981).

[31] Diane Ravitch, *The Troubled Crusade: American Education, 1945-1980* (New York: Basic Books, 1983), pp. 55-80.

[32] Arthur G. Powell, Eleanor Farrar, and David K. Cohen, *The Shopping Mall High School: Winners and Losers in the Educational Marketplace* (Boston: Houghton Mifflin Company, 1985).

[33] Ravitch, *The Troubled Crusade*.

[34] James Rosenbaum, *Making Inequality*; Samuel Bowles and Herbert Gintis, *Schooling in Capitalist America* (New York: Basic Books, 1976); John I. Goodlad, *A Place Called School* (New York: McGraw-Hill, 1984); Jeannie Oakes, *Keeping Track* (New Haven: Yale University Press, 1985).

[35] The list of magazine articles is from Susan D. Allan, "Ability-Grouping Research Reviews: What Do They Say About Grouping and the Gifted?" *Educational Leadership*, March 1991, pp. 60-67.

[36] A meta-analysis of the experimental research, studies that randomly assigned students to grouped and ungrouped conditions, also detected an effect indistinguishable from zero. See Frederick Mosteller, Richard J. Light, and Jason A. Sachs, "Sustained Inquiry in Education: Lessons from Skill Grouping and Class Size," *Harvard Educational Review*, 66, 4 (Winter 1996): 797-842. Mosteller, Light, and Sachs found fifteen experiments: ten studies of XYZ, two studies of the Joplin Plan, and three studies of within-class ability grouping.

[37] Only nine of the 51 XYZ studies in the Kuliks' review adapted curriculum to ability level. Another key difference from contemporary tracking is that almost half of the XYZ studies, twenty-five, took place in elementary grades.

[38] Slavin suspects a selection effect, a phenomenon that taints comparisons of two programs. Two students with the same test scores may differ in characteristics important to learning: for example, study habits, motivation, behavior, or attendance. If one of these students gets into a gifted program and experiences significant gains in achievement, and the other student is rejected and only attains mediocre test scores in the regular class, the achievement difference might be attributable to good screening on characteristics supporting learning, not to differences in program quality.

[39] The studies vary on the grade levels and ages of pupils, whether the groups were for only one academic subject of an entire regimen of courses, whether IQ or achievement tests were used to assign students to groups, and, as already noted, whether curricular content was adjusted to ability levels. Omitted variables, factors that affect learning but were left unmeasured, include: How curriculum was altered when it was altered, the qualifications of teachers,

whether teachers changed their instruction according to each group's level, and, if so, the instructional techniques teachers employed.

[40] Adam Gamoran, "The Stratification of High School Learning Opportunities," *Sociology of Education*, 60 (July 1987): 135-155. In a study of streaming in England, high ability groups were found to learn more and low ability groups less than they would have in ungrouped settings. See Alan C. Kerckhoff, "Effects of Ability Grouping in British Secondary Schools," *American Sociological Review*, 51 (December 1986): 842-858. Whether the finding may be generalized to American schools is questionable.

[41] The 10% greater probability for African-Americans to be placed in high tracks is reported in Adam Gamoran and Robert D. Mare, "Secondary School Tracking and Educational Inequality: Compensation, Reinforcement, or Neutrality?" *American Journal of Sociology*, 94, 5 (March 1989): 1146-83. In a re-evaluation of the data using transcript records, however, Lucas and Gamoran found that the advantage evaporates when the racial composition of schools is controlled, suggesting that predominantly minority, inner-city schools bias the estimate. They are more likely to place students with low test scores into the academic track than are predominantly white, suburban schools. Samuel R. Lucas and Adam Gamoran (1993), "Race and Track Assignment: A Reconsideration with Course-Based Indicators," Working Paper, University of Wisconsin-Madison. The important point is that high track African-American students in these inner-city schools would still lose out by being placed in heterogneous classes unless the high track benefit varies by school racial composition, something not yet shown. The formation of the race gap before high school is reported in National Center for Education Statistics, *Reading and Mathematics Achievement: Growth in High School, Issue Brief* (Washington, D. C.: National Center for Education Statistics, December 1997). Available online at http://nces.ed.gov/pubs98/98038.html. On tracking and ability grouping's relationship to the race gap, see Ronald F. Ferguson, "Evidence that Schools Can Narrow the Black-White Test Score Gap," in eds. Christopher Jencks and Meredith Phillips, *The Black-White Test Score Gap* (Washington, D.C.: Brookings Institution, in press).

[42] The comparison of achivement in tracked versus heterogeneous classes is in Laura M. Argys, Daniel I. Rees, and Dominic J. Brewer, "Detracking America's Schools: Equity at Zero Cost?" *Journal of Policy Analysis and Management*, 15, 4 (Fall 1996): 623-645. The analysis of 8th grade algebra and 8th grade survey courses is in Joyce L. Epstein and Douglas J. MacIver, *Opportunities to Learn: Effects on Eighth Graders of Curriculum Offerings and Instructional Approaches, Report No. 34* (Baltimore: Center for Research on Elementary and Middle Schools, July 1992).

[43] I identify several problems with the HSB and NELS studies of tracking in Tom Loveless, "The Use and Misuse of Research in Educational Reform," in ed. Diane Ravitch, *Brookings Papers on Education Policy*, 1998 (Washington, D.C.: Brookings Institution Press, 1998): 279-317.

[44] For the lingering effect of class in HSB data, see Adam Gamoran and Mare, "Secondary Schooling and Educational Inequality."

[45] *First Things First: What American Expect from the Public Schools* (New York: Public Agenda Foundation, 1994), p. 18.

[46] James A. Kulik, *An Analysis of the Research on Ability Grouping: Historical and Contemporary Perspectives* (Storrs, Connecticut: National Research Center on the Gifted and Talented, 1992): 43-45.

[47] The Maryland transcript study is Bruce L. Wilson and Gretchen and Gretchen B. Rossman, *Mandating Academic Excellence*. The analysis of NELS data is in David Lee Stevenson, Kathryn S. Schiller, and Barbara Schneider, "Sequences of Opportunities for Learning," *Sociology of Education*, 67, 3 (July 1994): 184-198.

[48] Jeannie Oakes, *Multiplying Inequalities: The Effects of Race, Social Class, and Tracking on Opportunities to Learn Mathematics and Science* (Santa Monica, California: Rand Corporation, 1990).

[49] Camilla Persson Benbow and Julian C. Stanley, "Inequity in Equity: How Equity Can Lead to Inequity for High-Potential Students," *Psychology, Public Policy, and Law*, 2, 2 (1996): 249-292.

[50] National Center for Education Statistics, *Curricular Differentiation in Public High Schools Survey , 1994* (Washington, D.C.: National Center for Education Statistics, 1994): Tables 8-11. Data from a representative national sample of 912 schools, *National Survey of High School Curricular Options*, conducted for the National Center for Education Statistics, fall 1993.

[51] Linda Valli, "A Curriculum of Effort: Tracking Students in a Catholic High School," in eds. Reba Page and Linda Valli, *Curriculum Differentiation: Interpretive Studies in U.S. Secondary Schools* (Albany: SUNY Press, 1990), pp. 45-65. Margaret Camarena, "Following the Right Track: A Comparison of Tracking Practices in Public and Catholic Schools," in eds. Reba Page and Linda Valli, *Curriculum Differentiation: Interpretive Studies in U.S. Secondary Schools* (Albany: SUNY Press, 1990), pp. 159-182. Adam Gamoran, "Alternative Uses of Ability Grouping in Secondary Schols: Can We Bring High-Quality Instruction to Low-Ability Classrooms?" *American Journal of Education*, 102, 1 (November 1993): 1-22.

[52] The phrase is from Lee S. Shulman, "Autonomy and Obligation: The Remote Control of Teaching," in eds. Lee S. Shulman and Gary Sykes, *Handbook of Teaching and Policy* (New York: Longman, 1983): p. 484.

[53] Robert E. Slavin, "Achievement Effects of Ability Grouping in Secondary Schools: A Best-Evidence Synthesis," *Review of Educational Research*, 60, 3 (Fall 1990), p. 494.

[54] Jeannie Oakes, Kevin Welner, and Susan Yonezawa, "Mandating Equity: A Case Study of Court-Ordered Detracking in San Jose Schools." From the California Policy Seminar Brief Series, March 1998, p. 4. Available online at: http://www.ucop.edu/cps/oaks.html.

[55] Analyzing LSAY data, Rochelle Gutierrez identified eight exemplary high school mathematics departments in schools serving low income students. The study supports the idea that high quality education can be found in both tracked and untracked settings. Four of the schools tracked and four didn't. Gutierrez concludes that "tracking is not the pivotal policy on which student advancement in mathematics depends." Rochelle Gutierrez, "Practices, Beliefs, and Cultures of High School Mathematics Departments: Understanding Their Influence on Student Achievement," *Journal of Curriculum Studies*, 28, 5 (1996): 495-529.

[56] Ron Ferguson quotes black male students who feel that they are perceived as stupid in heterogeneous classes. Ferguson makes the point that how teachers handle achievement differences probably matters more than grouping practices. See Ronald F. Ferguson, "Evidence that Schools Can Narrow the Black-White Test Score Gap," in eds. Christopher Jencks and Meredith Phillips, *The Black-White Test Score Gap* (Washington, D.C.: Brookings Institution, in press).

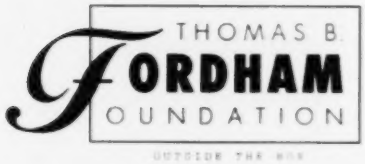
[57] Frederick Mosteller, Richard J. Light, and Jason A. Sachs, "Sustained Inquiry in Education: Lessons from Skill Grouping and Class Size," *Harvard Educational Review*, 66, 4 (Winter 1996): 797-842.

[58] All quotes in the paragraph are from: Jeannie Oakes, Amy Stuart Wells, and Associates, *Beyond the Technicalities of School Reform: Policy Lessons from Detracking Schools* (Los Angeles: UCLA Graduate School of Education & Information, 1996). The researchers, avowed opponents of tracking, studied ten middle schools and high schools that are attempting to detrack. The phrase "rethinking what it means to be smart" is used on page 18 and can be found elsewhere in the report. The hostility toward AP classes is revealed on pages 26, 29-30, 35. Middle-class

suburban norms are seen as reinforcing tracking on page 17. The quotation about norms of competition and individualism is on pp. 20-21. The multicultural electives are described on page 10.

[59] Chen-Lin C. Kulik and James A. Kulik, "Effects of Ability Grouping on Secondary School Students: A Meta-Analysis of Evaluation Findings," *American Educational Research Journal*, 19 (1982): 415-428. Chen-Lin C. Kulik and James A. Kulik, "Effects of Ability Grouping on Elementary School Pupils: A Meta-Analysis." Paper presented at the annual meeting of the American Psychological Association, Toronto (August 1984). Available as ERIC Document ED 255 329. James A. Kulik, *An Analysis of the Research on Ability Grouping: Historical and Contemporary Perspectives* (Storrs, Connecticut: National Research Center on the Gifted and Talented, 1992). James A.Kulik and Chen-Lin C. Kulik, "Meta-Analytic Findings on Grouping Programs," *Gifted Child Quarterly*, 36, 2 (Spring 1992): 73-77.

[60] Robert E. Slavin, "Ability Grouping and Student Achievement in Elementary Schools: A Best-Evidence Synthesis," *Review of Educational Research*, 57, 3 (Fall 1987): 293-336. Robert E. Slavin, "Achievement Effects of Ability Grouping in Secondary Schools: A Best Evidence Synthesis," *Review of Educational Research*, 60, 3 (Fall 1990): 471-499. Robert E. Slavin, "Ability Grouping in the Middle Grades: Achievement Effects and Alternatives," *The Elementary School Journal*, 93, 5 (May 1993): 535-552.



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